AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1.(Currently Amended) An image decoding apparatus that divides a coded image data into a plurality of code blocks of a plurality of layers based on a control parameter, and carries out a first image decoding process, a second image decoding process, and a third image decoding process to each of said plurality of code blocks, comprising:

an ~~analyzer~~analyzing processor adapted to calculate a first process quantity for said second image decoding process and said third image decoding process within a process time that is taken for a decoding process to said coded image data, and calculate a second process quantity for said first image decoding process based on said first process quantity,

wherein said first image decoding process comprises an arithmetic decoding process and a bit modeling decoding process, said second image decoding process comprising an inverse quantization process, and said third image decoding process comprising an inverse wavelet conversion process; and

an image ~~decoder~~decoding processor adapted to obtain a decoded image by executing said second image decoding process and said third image decoding process to the coded image data after said first image decoding process based on said second process quantity.

2.(Currently Amended) The image decoding apparatus according to claim 1,

wherein said ~~analyzer~~analyzing processor is adapted to calculate a process time for each of said first image decoding process, said second image decoding process, and said third image decoding process to each of said plurality of code blocks based on a predetermined process time for each of said first image decoding process, said second image decoding process, and said third image decoding process, a unit process time for each of said first image decoding process, said second image decoding process, and said third image decoding process, and a predetermined weighting quantity assigned to said code black, and to determine a first number of code blocks, a second number of code blocks, and a third number of code blocks based on said predetermined process time and said calculated process time, and

wherein said image ~~decoder~~decoding processor is adapted to determine said first number of code blocks applicable with said first image decoding process within said

predetermined process time for said first image decoding process, said second number of code blocks applicable with said second image decoding process within said predetermined process time for said second image decoding process, and said third number of code blocks applicable with said third image decoding process with said predetermined process time for said third image decoding process.

3.(Currently Amended) The image decoding apparatus according to claim 2, wherein said ~~analyzer~~analyzing processor is adapted to determine said first number of code blocks based on said second number of code blocks.

4.(Currently Amended) The image decoding apparatus according to claim 2, wherein said image ~~decoder~~decoding processor is adapted to execute said first image decoding process, said second image decoding process, and said third image decoding process from a bit plane on an MSB side, and execute said first image decoding process, said second image decoding process, and said third image decoding process to subsequent code blocks without waiting for a completion of said first image decoding process, said second image decoding process, and said third image decoding process to all of a bit plane of a current code block, when said first image decoding process, said second image decoding process, and said third image decoding process for said current code block cannot be completed within said calculated process time.

5.(Currently Amended) The image decoding apparatus according to claim 4, wherein when said first image decoding process, said second image decoding process, and said third image decoding process to said current code block is completed within said calculated process time, said image ~~decoder~~decoding processor is adapted to allocate a remaining time of said calculated process time to said first image decoding process, said second image decoding process, and said third image decoding process for a portion of the code block that is not completed within said calculated process time.

6.(Previously Presented) The image decoding apparatus according to claim 1, wherein said coded image data comprises said control parameter.

7.(Currently Amended) An image decoding method that divides a coded image data into a plurality of code blocks of a plurality of layers based on a control parameter, and carries out a first image decoding process, a second image decoding process, and a third image decoding process to each of said plurality of code blocks, comprising:

calculating a first process quantity by an analyzing processor for said second image decoding process and said third image decoding process within a process time that is taken for a decoding process to said coded image data, and calculate a second process quantity for said first image decoding process based on said first process quantity,

wherein said first image decoding process comprises an arithmetic decoding process and a bit modeling decoding process, said second image decoding process comprising an inverse quantization process, and said third image decoding process comprising an inverse wavelet conversion process; and

obtaining a decoded image by a decoding processor by executing said second image decoding process and said third image decoding process to the coded image data after said first image decoding process based on said second process quantity.

8.(Currently Amended) The image decoding method according to claim 7, further comprising:

calculating a process time by the analyzing processor for each of said first image decoding process, said second image decoding process, and said third image decoding process to each of said plurality of code blocks based on a predetermined process time for each of said first image decoding process, said second image decoding process, and said third image decoding process, a unit process time for each of said first image decoding process, said second image decoding process, and said third image decoding process, and a predetermined weighting quantity assigned to said code black, and to determine a first number of code blocks, a second number of code blocks, and a third number of code blocks based on said predetermined process time and said calculated process time; and

determining said first number of code blocks applicable with said first image decoding process within said predetermined process time by the decoding processor for said first image decoding process, said second number of code blocks applicable with said second image

decoding process within said predetermined process time for said second image decoding process, and said third number of code blocks applicable with said third image decoding process with said predetermined process time for said third image decoding process.

9.(Currently Amended) The image method according to claim 8, further comprising determining said first number of code blocks by the analyzing processor based on said second number of code blocks.

10.(Currently Amended) The image decoding method according to claim 8, further comprising executing said first image decoding process by the decoding processor, said second image decoding process, and said third image decoding process from a bit plane on an MSB side, and executing said first image decoding process, said second image decoding process, and said third image decoding process to subsequent code blocks without waiting for a completion of said first image decoding process, said second image decoding process, and said third image decoding process to all of a bit plane of a current code block, when said first image decoding process, said second image decoding process, and said third image decoding process for said current code block cannot be completed within said calculated process time.

11.(Currently Amended) The image decoding method according to claim 10, wherein when said first image decoding process, said second image decoding process, and said third image decoding process to said current code block is completed within said calculated process time, further comprising allocating a remaining time of said calculated process time to said first image decoding process by the decoding processor, said second image decoding process, and said third image decoding process for a portion of the code block that is not completed within said calculated process time.

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22.(Canceled)

23.(Previously Presented) A computer-readable storage medium encoded with a computer program for causing a processor to perform an image decoding method of decoding a decoded image data from a coded image data through a plurality of decoding processes, comprising:

determining a process quantity of said coded image data in said plurality of image decoding processes within a unit process time based on a parameter for said coded image data; and

carrying out said plurality of image decoding processes to said coded image data for the determined process quantity.